

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

REMARKS/ARGUMENTS

1. Claims 1-3 are pending.

2. Claims 1-2 stand rejected, under 35 U.S.C. § 103(a), for obviousness over Cheung et al. (hereinafter "Cheung"), in view of Schuurs et al. (hereinafter "Schuurs"), and further in view of Metcalfe et al. (hereinafter "Metcalfe").

Applicants submit herewith Exhibit A, which details that the Cheung reference (Analytical Chemistry 282: 24-28, 2000) was published in the June 15, 2000 edition of the journal. Therefore, the Cheung reference does not qualify as prior art, under 35 U.S.C. § 102(b), over the present application, which claims priority from U.S. Provisional Patent Appl. No. 60/265,135, filed January 30, 2001.

Furthermore, Applicants submit herewith a 37 C.F.R. 1.131 Declaration of Janice A. Brown, co-inventor on the present application, which recounts that the claimed invention of claims 1 and 2 was conceived and reduced to practice prior to June, 2000.

Accordingly, Applicants respectfully request reconsideration of the Office Action mailed February 26, 2004.

3. Claim 3 stands rejected, under 35 U.S.C. § 103(a), for obviousness over Cheung, in view of Schuurs, in further view of Metcalfe, and further in view of Craig et al. (hereinafter "Craig").

Applicants submit herewith a 37 C.F.R. 1.131 Declaration of Janice A. Brown, co-inventor on the present application, which describes that the claimed invention of claim 3 was conceived and reduced to practice prior to June, 2000.

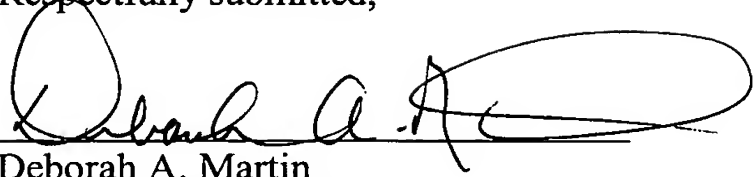
Accordingly, Applicants respectfully request reconsideration of the Office Action mailed February 26, 2004.

4. In view of the Remarks/Arguments hereinabove, and the Declaration submitted herewith, Applicants believe that the Application is in condition for immediate allowance. Therefore, reconsideration of the Office Action mailed February 26, 2004, and a timely Notice of Allowance is respectfully requested.

Appl. No. 10/053,262
Amendment dated July 26, 2004
Reply to Office Action of February 26, 2004

Date: July 26th, 2004

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Deborah A. Martin", written over a horizontal line.

Deborah A. Martin
Attorney for Applicant
Reg. No. 44,222

Pfizer Inc.
Patent Department, MS 8260-1611
Eastern Point Road
Groton, Connecticut 06340
(860) 715-1821

Exhibit A

Appl. No. 10/053, 262 - Response to
Office Action of February 26, 2004

Register or Login: user name Password:

[Home](#) [Search](#) [Journals](#) [Abstract Databases](#) [Books](#) [Reference Works](#) [My Profile](#) [Alerts](#) [Help](#)

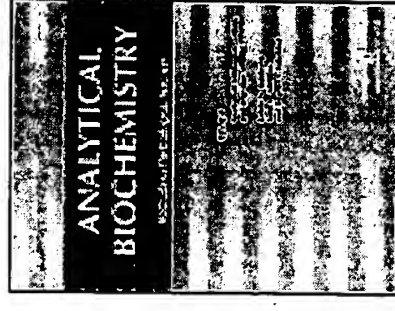
Quick Search: within This Volume/Issue [Search Tips](#)

[issue list](#)

Analytical Biochemistry

Copyright © 2004 Elsevier Inc. All rights reserved

Volume 282, Issue 1, Pages 1-164 (15 June 2000)



[display checked docs](#) [e-mail articles](#) [export citations](#)

View: Citations

1. ☐ **Enzymatic Microtiter Plate-Based Nitrate Detection in Environmental and Medical Analysis • ARTICLE**
Pages 1-9
Heike Borchering, Steven Leikefeld, Christa Frey, Stephan Diekmann and Peter Steinrücke
[Abstract](#) | [Abstract + References](#) | [PDF \(99 K\)](#)
2. ☐ **Determination of the Binding Parameters of Drug to Protein by Equilibrium Dialysis/Piezoelectric Quartz Crystal Sensor • ARTICLE**
Pages 10-15
AnHong Zhou, DeLiang He, LiHua Nie and ShouZhuo Yao
[Abstract](#) | [Abstract + References](#) | [PDF \(68 K\)](#)
3. ☐ **High-Resolution Magic Angle Spinning ¹H NMR Spectroscopy of Intact Liver and Kidney: Optimization of Sample Preparation Procedures and Biochemical Stability of Tissue during Spectral Acquisition • ARTICLE**
Pages 16-23
N. J. Waters, S. Garrod, R. D. Farrant, J. N. Haselden, S. C. Connor, J. Connelly, J. C. Lindon, E. Holmes and J. K. Nicholson

[Abstract](#) | [Abstract + References](#) | [PDF \(137 K\)](#)

4. ☐ **A Scintillation Proximity Assay for Poly(ADP-ribose) Polymerase • ARTICLE**
Pages 24-28

Anissa Cheung and Jie Zhang

[Abstract](#) | [Abstract + References](#) | [PDF \(198 K\)](#)

5. ☐ **Influence of Cell Fixation on Chromatin Topography • ARTICLE**
Pages 29-38

S. Kozubek, E. Lukágová, J. Amrichová, M. Kozubek, A. Ližková and J. Šlotová

[Abstract](#) | [Abstract + References](#) | [PDF \(244 K\)](#)

6. ☐ **Catalytic Chromatography • ARTICLE**
Pages 39-45

Luis A. Jurado, James T. Drummond and Harry W. Jarrett

[Abstract](#) | [Abstract + References](#) | [PDF \(124 K\)](#)

7. ☐ **A Branched DNA Signal Amplification Assay to Quantitate Messenger RNA of Human Uncoupling Proteins 1, 2, and 3 • ARTICLE**
Pages 46-53

Lubing Zhou, Ellen V. Cryan, Lisa K. Minor, Joseph W. Gunnet and Keith T. Demarest

[Abstract](#) | [Abstract + References](#) | [PDF \(197 K\)](#)

8. ☐ **Histidine-Tagged Ubiquitin Substitutes for Wild-Type Ubiquitin in *Saccharomyces cerevisiae* and Facilitates Isolation and Identification of *in Vivo* Substrates of the Ubiquitin Pathway • ARTICLE**
Pages 54-64

Richard Ling, Elsbeth Colón, Michael E. Dahmus and Judy Callis

[Abstract](#) | [Abstract + References](#) | [PDF \(220 K\)](#)

9. ☐ **Genetically Fused Protein A-Luciferase for Immunological Blotting Analyses • ARTICLE**
Pages 65-69

Xiao-mei Zhang, Eiry Kobatake, Kiyoaki Kobayashi, Yasuko Yanagida and Masuo Aizawa

[Abstract](#) | [Abstract + References](#) | [PDF \(132 K\)](#)

10. ☐ **Detection of DNA via an Ion Channel Switch Biosensor • ARTICLE**
Pages 70-79

Sally Wright Lucas and Margaret M. Harding
[Abstract](#) | [Abstract + References](#) | [PDF \(118 K\)](#)

11. ☐

Modified Telomeric Repeat Amplification Protocol: A Quantitative Radioactive Assay for Telomerase without Using Electrophoresis • ARTICLE
Pages 80-88

Istvan Szatmari, Szilvia Tőkés, Christopher B. Dunn, Thomas J. Bardos and Janos Aradi
[Abstract](#) | [Abstract + References](#) | [PDF \(145 K\)](#)

12. ☐

Determination of Ascorbic Acid and Dehydroascorbic Acid in Biological Samples by High-Performance Liquid Chromatography Using Subtraction Methods: Reliable Reduction with Tris[2-carboxyethyl]phosphine Hydrochloride • ARTICLE

Pages 89-93

Jens Lykkesfeldt

[Abstract](#) | [Abstract + References](#) | [PDF \(67 K\)](#)13. ☐

Cytostar-T Scintillating Microplate Assay for Measurement of Sodium-Dependent Bile Acid Uptake in Transfected HEK-293 Cells • ARTICLE

Pages 94-101

Helena Bonge, Stefan Hallén, Jan Fryklund and Jan-Eric Sjöström

[Abstract](#) | [Abstract + References](#) | [PDF \(172 K\)](#)14. ☐

Effects of Dithiothreitol on Protein Activity Unrelated to Thiol-Disulfide Exchange: For Consideration in the Analysis of Protein Function with Cleland's Reagent • ARTICLE

Pages 102-106

Mark C. Alliegro

[Abstract](#) | [Abstract + References](#) | [PDF \(99 K\)](#)15. ☐

Development of a Scintillation Proximity Assay for β -Ketoacyl-acyl Carrier Protein Synthase III • ARTICLE
Pages 107-114

Xin He, John P. Mueller and Kevin A. Reynolds

[Abstract](#) | [Abstract + References](#) | [PDF \(169 K\)](#)16. ☐

Quantitative Measurement of Sphingosine 1-Phosphate by Radioreceptor-Binding Assay • ARTICLE
Pages 115-120

Naoya Murata, Koichi Sato, Junko Kon, Hideaki Tomura and Fumikazu Okajima

[Abstract](#) | [Abstract + References](#) | [PDF \(68 K\)](#)

17. ☐ **Affinity Biosensor for Avidin Using a Double Functionalized Dendrimer Monolayer on a Gold Electrode • ARTICLE**
Pages 121-128

Hyun C. Yoon, Mi-Young Hong and Hak-Sung Kim
[Abstract](#) | [Abstract + References](#) | [PDF \(103 K\)](#)

18. ☐ **Competitive Hybridization: Theory and Application in Isolation and Quantification of Differentially Regulated Genes • ARTICLE**

Pages 129-135

Guang Yan Zhong, Joseph Riov, Raphael Goren and Doron Holland
[Abstract](#) | [Abstract + References](#) | [PDF \(109 K\)](#)

19. ☐ **Identification of Sulfonyleureas in Serum by Electrospray Mass Spectrometry • ARTICLE**
Pages 136-141

F. Magni, L. Marazzini, S. Pereira, L. Monti and M. Galli Kienle
[Abstract](#) | [Abstract + References](#) | [PDF \(90 K\)](#)

20. ☐ **A Fiber-Optic Microarray Biosensor Using Aptamers as Receptors • ARTICLE**
Pages 142-146

Myoyong Lee and David R. Walt
[Abstract](#) | [Abstract + References](#) | [PDF \(81 K\)](#)

21. ☐ **Electrophoresis of Proteins and Protein-Protein Complexes in a Native Agarose Gel • SHORT COMMUNICATION**
Pages 147-149

Rosalind Kim, Hisao Yokota and Sung-Hou Kim
[Abstract](#) | [Abstract + References](#) | [PDF \(95 K\)](#)

22. ☐ **Phosphohistidine Analysis Using Reversed-Phase Thin-Layer Chromatography • SHORT COMMUNICATION**
Pages 149-153

Paul G. Besant, Michael V. Lasker, Cuong D. Bui and Christoph W. Turck
[Abstract](#) | [Abstract + References](#) | [PDF \(171 K\)](#)

23. ☐ **An In-Gel Assay of a Recombinant Western Corn Rootworm (*Diabrotica virgifera virgifera*) Cysteine Proteinase Expressed in Yeast • SHORT COMMUNICATION**
Pages 153-155

Hisashi Koiwa, Matilde Paino D'Urzo, Keyan Zhu-Salzman, Jose Ignacio Ibeas, Richard E. Shade, Larry L. Murdock, Ray A. Bressan and Paul M. Hasegawa
[Abstract](#) | [Abstract + References](#) | [PDF \(108 K\)](#)

24. ☐ **Polymerase Dependence of Autosticky Polymerase Chain Reaction** • SHORT COMMUNICATION
Pages 156-158

József Gál, Róbert Schnell and Miklós Kálmán
[Abstract](#) | [Abstract + References](#) | [PDF \(43 K\)](#)

25. ☐ **A Noncommercial Dual Luciferase Enzyme Assay System for Reporter Gene Analysis** • SHORT COMMUNICATION
Pages 158-161

Benjamin W. Dyer, Fernando A. Ferrer, Donna K. Klinedinst and Ronald Rodriguez
[Abstract](#) | [Abstract + References](#) | [PDF \(107 K\)](#)

26. ☐ **Reaction of Tris(2-carboxyethyl)phosphine (TCEP) with Maleimide and α -Haloacyl Groups: Anomalous Elution of TCEP by Gel Filtration** • SHORT COMMUNICATION
Pages 161-164

Douglas E. Shafer, John K. Inman and Andrew Lees
[Abstract](#) | [Abstract + References](#) | [PDF \(79 K\)](#)

[issue list](#)[Home](#)[Search](#)[Journals](#)[Abstract Databases](#)[Books](#)[Reference Works](#)[My Profile](#)[Alerts](#)[Help](#)[Feedback](#) | [Terms & Conditions](#) | [Privacy Policy](#)

Copyright © 2004 Elsevier B.V. All rights reserved. ScienceDirect® is a registered trademark of Elsevier B.V.

Purpose: Repeat the compound (see below) dose responses using the biotinylated NAD PARP ELISA assay format

Procedure

Biotinylated NAD

PARP (partially purified) 5 µg/µl
5.3 mg/µl protein in stock
dilute stock 1:1000 to make a 5.3 µg/µl stock
For 1 plt make 13 µl
13 µl PARP + 12.987 µl buffer (50 mM Tris HCl pH 8.0, 20 µM ZnCl₂, 4 mM MgCl₂)

Coat Plates overnight at 4°C

Wash 3x w T-PBS

Add the following (note for the next step keep all reagents on ice)

Buffer (50 mM Tris HCl pH 8.0, 20 µM ZnCl₂, 4 mM MgCl₂)
For 1 plt make 15 ml buffer

Cold NAD 100 µM (Fc)

66.34 mg/L = 100 µM NAD

$\frac{66.34 \text{ mg}}{1000 \text{ µl}} = \frac{15}{15 \text{ µl}} = .995 \text{ mg NAD} / 15 \text{ µl buffer} = 100 \text{ µM NAD}$

DTT 1 mM (Fc)

152.4 mg/L = 1 mM DTT

$\frac{152.4 \text{ mg}}{1000 \text{ µl}} = \frac{15}{15 \text{ µl}} = 2.286 \text{ mg DTT} / 15 \text{ µl buffer} = 1 \text{ mM DTT}$

Biotinylated NAD (25 µM Fc)

Make ~4.5 µl so add

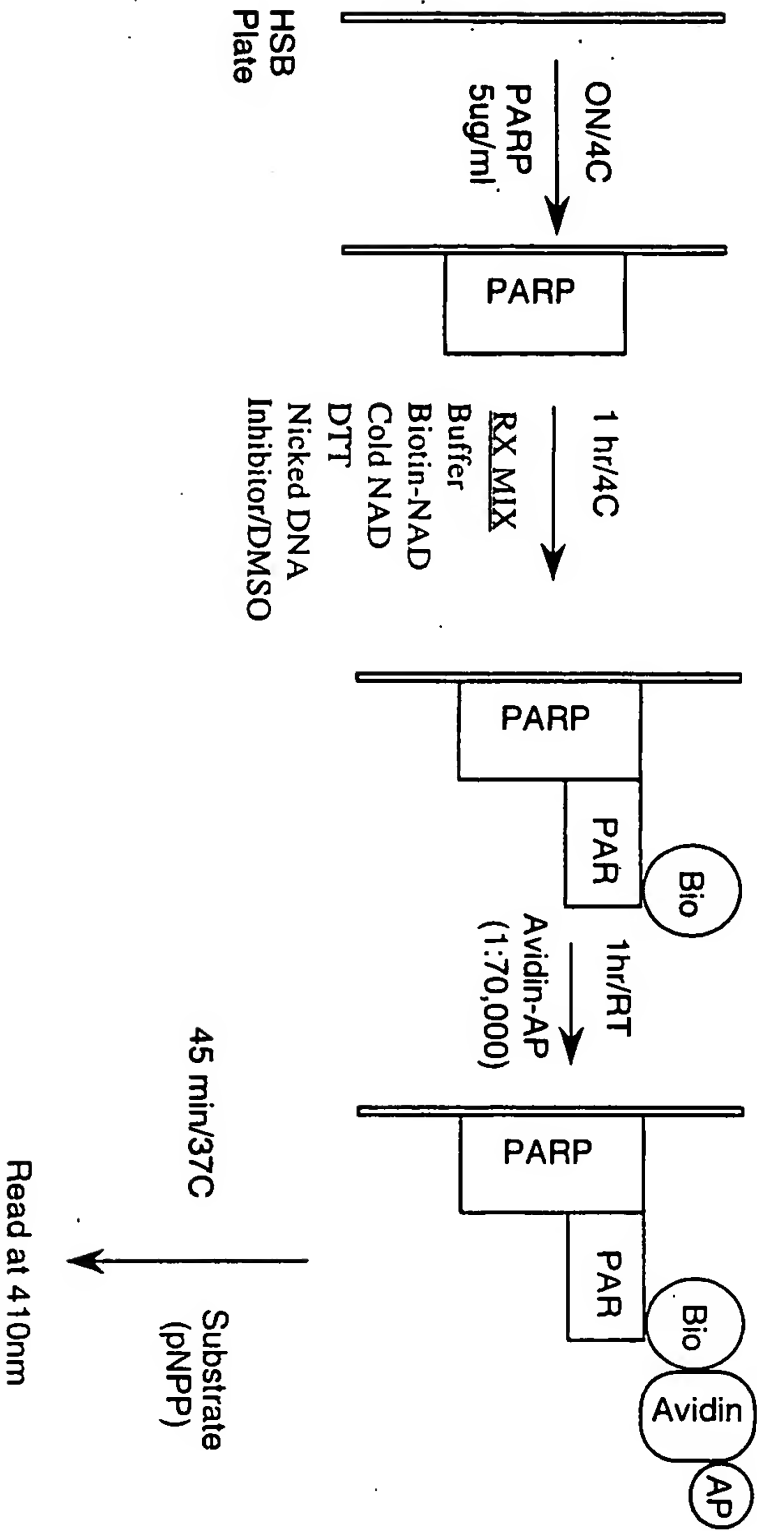
1.450 µl Biotinylated NAD to 13.050 µl of buffer containing cold NAD (100 µM) and DTT (1 mM)

Note: Adding biotinylated NAD to the above + cold NAD and + DTT buffer will cause a 10% reduction in buffer conc so now have 45 mM Tris HCl, 18 µM ZnCl₂, 3.6 mM MgCl₂, 90 µM cold NAD and 900 µM DTT. This was the same way buffer establishing these assays

James Brown
fjbr

Joseph MacAndrew

PARP Biotinylated NAD Assay



James Brown

James Brown



I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Hon. Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on this 26th day of July, 2004.

By

Janice M. Denison
(Signature of person mailing)
Janice M. Denison
(Typed or printed name of person)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

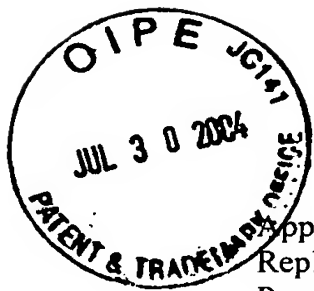
Appl. No.: 10/053,262
In Re Application of Janice A. Brown
et al.
Filed: January 18, 2002
Group Art Unit: 1641
Examiner: Davis, Deborah A.
Docket No.: PC11044ADAM
Customer No.: 28523

Hon. Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

37 CFR § 1.131 DECLARATION OF JANICE A. BROWN

Sir:

1. I, Janice A. Brown, am the first named inventor of the above-captioned application.
2. I, together with co-inventor Ravi B. Marala, conceived of, and reduced to practice, the invention claimed in Claims 1-3 of the pending application, before June, 2000.
3. Exhibit B, attached herewith, is a copy of a laboratory notebook (2 pages total) that I prepared, signed, and had witnessed, before June, 2000. Exhibit B is redacted only as to the dates of the laboratory notebook disclosure and witnessing, dates which all occur before June, 2000.
4. Exhibit A describes a method to assay poly(ADP-ribose) polymerase (PARP) activity which includes the steps of immobilizing PARP on a multiwell HSB plate, contacting the immobilized PARP with biotinylated nicotinamide-adenine-dinucleotide (NAD), at 4°C, and under conditions that allow PARP auto-ribosylation, contacting the auto-ribosylated PARP with



Appl. No. 10/053,053
Reply to Office Action of February 26, 2004
Page 2 of 2

an avidin-conjugated alkaline phosphatase detectable marker, thereby forming a complex between the auto-ribosylated PARP and the detectable marker, and measuring the amount of detectable marker complexed to auto-ribosylated PARP using a p-nitrophenyl phosphate (pNPP) substrate of alkaline phosphatase as an indication of the amount of PARP activity in the sample, wherein none of the above-listed reagents are radioactive.

5. I further declare that all statements made herein of my own knowledge are true and that all statements made on belief are believed true; and further, that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-captioned application or any patent issuing therefrom.

7/26/04
Date

Janice A. Brown
Janice A. Brown